To: **Technology Center 2800**
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From: Charles A. Brill
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Mezenner — Art Unit: 2873

Serial No.: 10/749,277 — Examiner: Dinh, Jack

Filed: 31 December 2003 — Docket No. TI-33824

For: VIA ADHESION IN MULTILAYER MEMS STRUCTURE

CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that the following papers are being transmitted by facsimile to the U.S. Patent and Trademark Office on the date shown below:

Charles A. Brill — December 2, 2005 Date

FACSIMILE COVER SHEET

X FACSIMILE COVER SHEET	X AMENDMENT (11 Pages)
___ NEW APPLICATION	___ EOT (# Month)
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___ ASSIGNMENT (# Pages)	___ APPEAL BRIEF (# Pages)
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___ DIVISIONAL APP'N	X SECOND AUTO-REPLY (1 Page)

NAME OF INVENTOR(S): Mezenner	RECEIPT DATE & SERIAL NO.: Application No.: 10/749,277
TITLE OF INVENTION: VIA ADHESION IN MULTILAYER MEMS STRUCTURE	**Filing Date:** 31 December 2003
TI FILE NO.: TI-33824 / DEPOSIT ACCT. NO.: 20-0668	
FAXED: 12/02/2005 DUE: ATTY/SEC'Y: CAB:ss	

Texas Instruments Incorporated
PO Box 655474, M/S 3999
Dallas, TX 75265

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Mezenner
Art Unit: 2873
Serial No.: 10/749,277
Examiner: Dinh, Jack
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COMMUNICATION

2 December 2005

MAILING CERTIFICATE UNDER 37 C.F.R. § 1.8 (a)
I hereby certify that the above correspondence is being deposited with the U.S. Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, PO Box 1450, Alexandria, Virginia, 22313-1450, or facsimile transmitted to the U.S. Patent and Trademark Office, on the date shown below.
Charles A. Brill — 2 Dec. 2005 (Date)

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

In a telephone call on 1 December 2005, Ms. Amanda Ford informed the applicant that the U.S.P.T.O. does not have a complete copy of the amendment in response to the Examiner's Action facsimile transmitted to the U.S.P.T.O. on 11 November 2005. Ms. Ford stated the request for an extension of time was received, and requested the applicant resubmit the entire amendment. Accordingly, it is believed no petition or fee is required.

From the applicant's fax confirmation and the two auto-replies received by the applicant, it appears that the transmission was received by the U.S.P.T.O. as two separate transmissions—one of which was not identifiable and was therefore unable to be matched to the proper file.

Copies of the original coversheet, original amendment, facsimile confirmation, and two auto-replies accompany this communication.

Respectfully submitted,

Charles A. Brill
Reg. No. 37,786

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********** -COMM. NAL- ********** DATE NOV-11-2005 ** TIME 19:08 **********

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To: **Technology Center 2800** Total Pages Sent 13
Facsimile Number: [redacted] 571-273-8300

From: Charles A. Brill
Texas Instruments Incorporated
Facsimile: 972-917-4418
Phone: 972-917-4379

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Mezenner Art Unit: 2873

Serial No.: 10/749,277 Examiner: Dinh, Jack

Filed: 31 December 2003 Docket No. TI-33824

For: VIA ADHESION IN MULTILAYER MEMS STRUCTURE

CERTIFICATION OF FACSIMILE TRANSMISSION

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Charles A. Brill — November 11, 2005 (Date)

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___ DIVISIONAL APP'N	___

NAME OF INVENTOR(S):	RECEIPT DATE & SERIAL NO.:
Mezenner	Application No.: 10/749,277
TITLE OF INVENTION: VIA ADHESION IN MULTILAYER MEMS STRUCTURE	Filing Date: 31 December 2003
TI FILE NO.: TI-33824 / DEPOSIT ACCT. NO.: 20-0668	
FAXED: 11/11/2005 DUE: 9/12/2005 ATTY/SECY: CAB:ss	

Texas Instruments Incorporated
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To: Technology Center 2800 Total Pages Sent 13
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From: Charles A. Brill 571-273-8300
Texas Instruments Incorporated
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Applicant: Mezenner Art Unit: 2873
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Auto-Reply Facsimile Transmission

TO: Fax Sender at 214 567 7859

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AMENDMENTS TO THE SPECIFICATION:

Please replace the paragraph beginning on line 20 of page 7 with the following rewritten paragraph:

The DMD mirrors 14a typically range from 10 um to 16 um square and made of aluminum for maximum reflectivity. They are arrayed on 11 um to 17 um centers to form a dense matrix of pixels. The hinge layer 13 under the mirrors 14a permits a close spacing of the mirrors 14a, and because of the underlying placement of the hinges, an array of pixel elements 10 is referred to as a "hidden hinge" type DMD architecture.

Please replace the paragraph beginning on line 5 of page 9 with the following rewritten paragraph:

A spacer layer 21, identified as S1, is then deposited over the M3 layer 12 [[11]]. Spacer layer 21 may be formed from hardened photoresist. Later in the packaging flow, this spacer layer 21 is plasma-ashed to form an air gap. A number of vias are then formed in spacer layer 21, formed by conventional pattern and etching techniques.

Please replace the paragraph beginning on line 16 of page 9 with the following rewritten paragraph:

FIGURES 4 - 6 illustrate fabrication of hinge layer 13. As explained below, hinge layer 13 contains both hinge 13a, spring tips 13b, and spring tip beams 13c (shown in Figures 1 and 7) from which the spring tips extend.

Please replace the paragraph beginning on line 26 of page 9 with the following rewritten paragraph:

FIGURE 5 illustrates a portion of the partially fabricated DMD having a via 31, similar to vias 32 [[, or]] and 33 of Figure 3, and the result of a patterned etch process. The etch leaves an oxide coating within the vias [[is]] 31, ~~32, or 33~~. The oxide at the bottom of the vias covers the thin metal at the bottom of each via, thereby providing strengthening. A develop rinse is then performed, or other cleanup to remove residue and prevent surface contamination. As an